



CONNECTION PIPES MAY BE PLACED ANY POSITION AROUND THE WALLS, PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLANS.

CURVATURE OF THE LIP AND SIDEWALLS AT GUTTER OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.

DIMENSIONS:

T = 6" IF H IS 8' OR LESS

T = 8" IF H IS GREATER THAN 8' AND LESS THAN 20'

H = 3' 6", UNLESS OTHERWISE SPECIFIED

FLOOR OF BASIN SHALL BE GIVEN A STEEL-TROWELLED FINISH.

MANHOLE SHALL BE PLACED AS SHOWN ON STD 300, SHEET 1 OF 3, UNLESS NOTED DIFFERENTLY ON IMPROVEMENT PLANS.

OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.

OPENING SHALL BE 4' UNLESS OTHERWISE SPECIFIED.

REINFORCING STEEL SHALL BE NO. 3 ROUND DEFORMED BARS IN TOP SLAB AND NO. 4 BARS AT 18 INCH CENTERS IN SIDES OF BOX.

STEPS SHALL BE BE 3/4" PLAIN ROUND GALVANIZED STEEL AND SHALL BE ALHAMBRA FDY. A-3320 OR EQUAL.

IF H IS 3.5 FEET OR LESS. NO STEPS ARE REQUIRED.

IF H IS MORE THAN 3.5 FEET, AND NOT MORE THAN 5', INSTALL 1 STEP 16" ABOVE FLOOR OF BASIN.

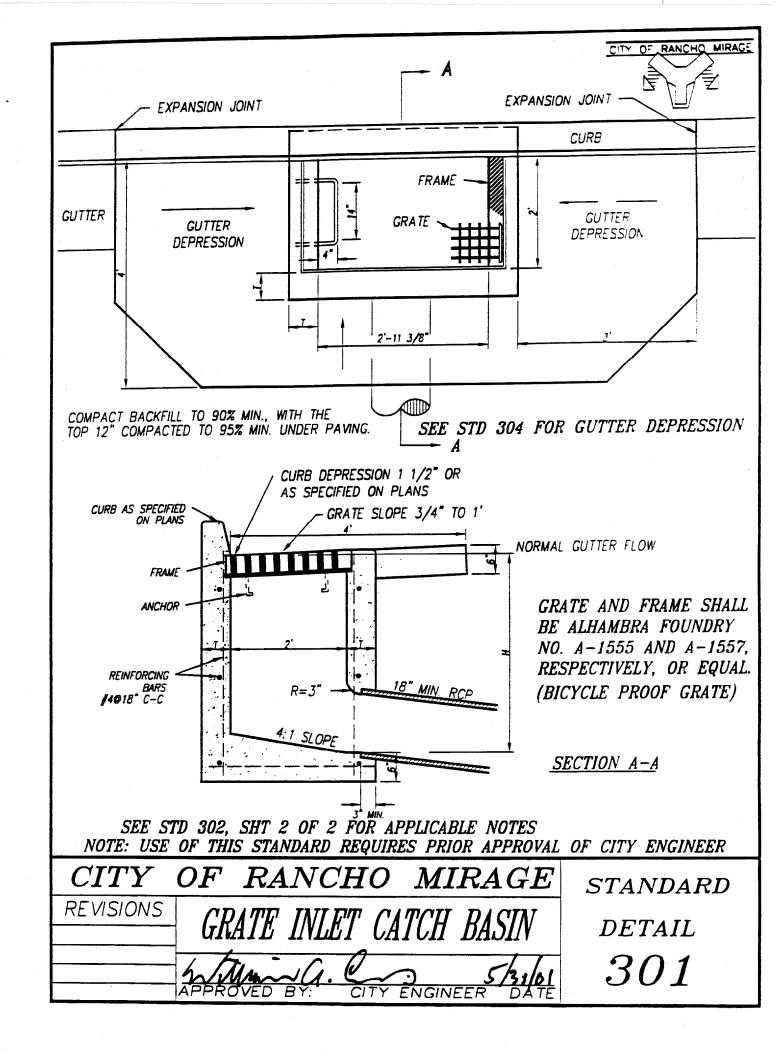
IF H IS MORE THAN 5 FEET, INSTALL STEPS 12" APART, WITH THE TOP STEP 6" BELOW THE SURFACE OF THE BASIN.

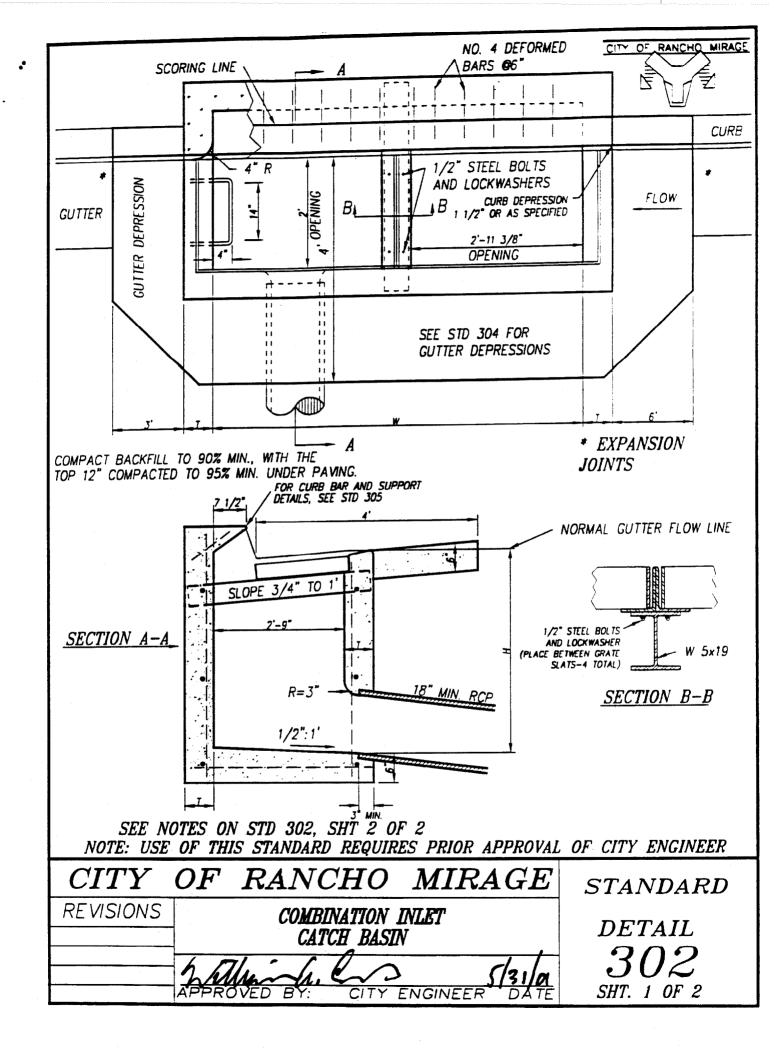
ALL STEPS SHALL BE 4" FROM THE WALL, EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2" (CLEAR) FROM THE WALL, AND ANCHORED NOT LESS THAN 5 INCHES IN THE WALL OF THE BASIN.

SURFACE OF ALL EXPOSED CONCRETE IN BASIN SHALL CONFORM IN SLOPE, GRADES, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB AND WALL ADJACENT TO THE BASIN.

CONCRETE SHALL BE CLASS 560—C—3250. WHEN THE BASIN IS CONTIGUOUS TO A SIDEWALK, THE TOP OF THE BASIN SHALL BE POURED MONOLITHIC WITH THE SIDEWALK USING CLASS 560—C—3250 CONCRETE FOR THE SIDEWALK AND THE TOP OF THE CATCH BASIN FINISHED PER SIDEWALK STANDARDS.

CITY	OF RANCHO MIRAGE	STANDARD
REVISIONS	CURB INLET CATCH BASIN	DETAIL
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BASIN SHALL HAVE ONE GRATING UNLESS OTHERWISE SPECIFIED ON IMPROVEMENT PLANS. GRATE AND FRAME SHALL BE ALHAMBRA FOUNDRY A-1555 AND A-1557, RESPECTIVELY, OR APPROVED EQUAL. ONLY BICYCLE PROOF GRATES WILL BE ALLOWED.

CONCRETE SHALL BE CLASS 560-C-3250. WHEN THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH A SIDEWALK, THE TOP OF THE BASIA SHALL BE POURED MONOLITHIC WITH THE SIDEWALK, USING CLASS 560-C-3250 CONCRETE FOR THE SIDEWALK. THE TOP OF THE CATCH BASIN SHALL BE FINISHED PER SIDEWALK STANDARDS.

CONNECTION PIPES MAY BE PLACED IN ANY POSITION AROUND THE WALLS, PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLAN.

CURVATURE OF THE END-WALLS AT CURB OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.

DIMENSIONS:

GRATE SHALL BE PARALLEL TO PLANE OF GUTTER SLOPE. 3/4" TO 1'.

 $T = 6^{\circ}$ if $H = 8^{\circ}$ or less $T = 8^{\circ}$ if $H = 8^{\circ}$ or less than 20°

H = 3'-6", UNLESS OTHERWISE SPECIFIED ON IMPROVEMENT PLANS

W = 2'-11 3/8" FOR ONE GRATING. ADD 3'-5 3/8" FOR EACH ADDITIONAL GRATING.

EXPOSED SURFACES OF THE CATCH BASIN SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH, AND SCORING TO EXISTING IMPROVEMENTS ADJACENT TO THE BASIN. WHERE NO SIDEWALK EXISTS, THE TOP SHALL BE FINISHED TO CONFORM TO STANDARD SIDEWALK SLOPE AND FINISH. WHERE NO CURB EXISTS, THE BATTER OF EXPOSED END WALLS ABOVE THE STREET SURFACE SHALL CONFORM TO BATTER FOR STANDARD CURB.

FLOOR OF BASIN SHALL BE GIVEN A STEEL-TROWELLED FINISH.

OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.

REINFORCING STEEL SHALL BE NO. 4 DEFORMED BARS. CLEARANCE SHALL BE 1 1/2" FROM INSIDE OF BOX. SPACING IS AS SHOWN IN TOP SLAB AND AT 18" CENTERS IN SIDES OF BOX.

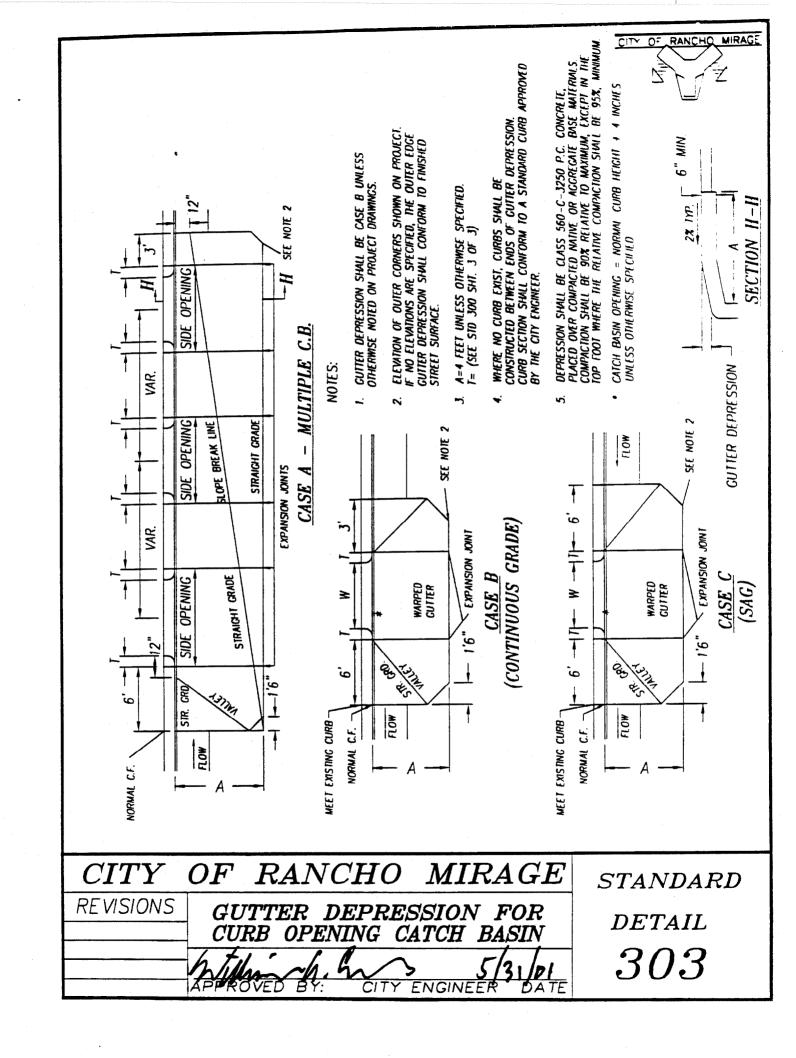
SLOPE OF FLOOR PARALLEL WITH CURB SHALL BE 1:12 UNLESS OTHERWISE SPECIFIED. SLOPE FLOOR FROM ALL DIRECTIONS TO THE OUTLET.

STEPS:

3/4" PLAIN ROUND GALVANIZED STEEL STEPS ARE REQUIRED AS FOLLOWS: ALHAMBRA FDY. A-3320 OR EQUAL IF H IS 3.5' OR LESS, NO STEPS ARE REQUIRED. IF H IS MORE THAN 3.5', AND NOT MORE THAN 5', INSTALL ONE STEP 16" ABOVE FLOOR OF BASIN. IF H IS MORE THAN 5', INSTALL STEPS 12" APART, WITH THE TOP STEP 6" BELOW THE TOP OF GRATING. ALL STEPS SHALL BE 4" CLEAR FROM THE WALL EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2" CLEAR FROM THE WALL AND ANCHORED NOT LESS THAN 5" IN WALL OF BASIN.

NOTE: USE OF THIS STANDARD REQUIRES PRIOR APPROVAL OF CITY ENGINEER

CITY	OF RANCHO MIRAGE	STANDARD
REVISIONS	COMBINATION INLET	DETAIL
	CATCH BASIN NOTES	DETAIL
	William 1, hrs 5/31/01	302
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MIRAGE CITY OF RANCHO DEPRESSION SHALL BE CLASS 560-C-3250 P.C. CONCRETE, PLACED OVER COMPACTED NATIVE OR AGGREGATE BASE MATERALS, COMPACTION SHALL BE 90% RELATIVE TO MAXIMUM, EXCEPT IN THE TOP FOOT WHERE THE RELATIVE COMPACTION SHALL BE 95%, MINIMUM. ELEVATIONS AT OUTER CORNERS SHOWN ON THE PROJECT DRAWNGS. IF NO ELEVATIONS ARE SPECIFIED, THE OUTER EDGE OF THE CUTTER DEPRESSION SHALL CONFORM TO THE FINISHED STREET SURFACE. 7 WHERE NO CURB EXISTS, CURB SHALL BE CONSTRUCTED BETWEEN ENDS OF CUTTER DEPRESSION. CURB SECTION SHALL CONFORM TO A STD CURB APPROVED BY THE CITY ENGINEER. CUTTER DEPRESSIONS SHALL BE CASE "A" (SEE STD 302) UNLESS A = 4 FEET UNLESS OTHERWISE SPECIFIED. I = SEE STD 302, SH1 2 OF 2 W = SEE STD 302, SH1 2 OF 2 OTHERMSE SPECIFIED 2 NORWAL C.F. SEE NOTE NOTES: FLOW 3 SEE NOTE 2 Sign Constitution of the C STR. GRO. ≥ CASE B (SAG) SLOPE BREAK LINE - EXPANSION JOINT OPENING FOR GRATING SLOPE BREAK LINE CASE ₹ OPENING FOR GRATING QUITE STATE ≥ SIR. GRD. 9.1 **G** à STE 1 FLOW \$ NORMAL C.F. FLOW OFRANCHOCITYMIRAGESTANDARD REVISIONS DEPRESSION ENING CATCH . TER **FOR** GU**DETAIL OPENING BASIN** 304 IDI DATE APPROVED BY: CITY ENGINEER

CITY OF RANCHO MIRAGE SEE RM STDS 300 & 302 - 11/15°R CUT REINFORCING STEEL TO CLEAR FACE PLATE 1/4"R CONFORM CURB BATTER TO (1 1/8" HOLE IN PLATE GUTTER FLOW LINE 24 ADJUSTING NUTS TO BE TIGHTENED AND SECURED IN PLACE WHEN STEEL PLATE ANGLE IS IN PROPER POSITION 1/2" DIAM. STIRRUP WELD AS SHOWN (3) 0 0 1/4" (1) FACE PLATE 5/16"x10" ROLLED PLATE (ASTM A36) FORMED AS SHOWN. 0 0 (ALHAMBRA FOUNDRY A-3911 OR EQUIV.) 4 EXTEND LENGTH OF BOX (2) FACE PLATE ANCHORAGE 1/2" DIA. STEEL ANCHOR 42" O.C. MAX. PLACE AS SHOWN (3) PROTECTION BAR: PLAIN ROUND STEEL BAR 1" DIA. SHALL BE INSTALLED WHEN NORMAL CURB HEIGHT IS GREATER THAN 6". THE BAR SHALL BE EMBEDDED 5" AT EACH END. (4) SUPPORT BAR 2" DIA. x20" LONG W/ SQ. HEAD AND HEX NUT, BEND AS SHOWN. SPACING SHALL NOT EXCEED 4 FEET. SECTION THROUGH CURB FACE 5. ALL EXPOSED METAL PARTS SHALL BE GAL VANIZED.

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FOR INSTALLATION IN STREET AREAS, A CLASS 100-E-100 SLURRY SHALL BE USED IN LIEU OF COMPACTED BACKFILL. A MIN. 3" A.C. SHALL BE PLACED OVER SLURRY.

24" DIAM. C.I. GRATE & FRAME ALHAMBRA FOUNDRY A-1200 OR APPROVED EQUAL. ADAPT AS REQUIRED FOR 'V' GUTTER AND CURB & GUTTER INSTALLATION. SET RIM TO GRADE WITH PRECAST RISERS.

COMPACT BACKFILL TO 90% MIN. WITH TOP 12" COMPACTED TO 95% 48" DIAM. PRECAST MANHOLE CONE 6" PVC DOWN DRAIN WITH FILTERED COLLAR PER DETAIL, SHEET 2 -6" DOME TYPE GRATE ON INLET 5' MIN. PRECAST REINFORCED CONC. SLAB 4" CONCRETE SLAB (POURED IN PLACE) EXTEND 6" INTO UNDISTURBED SOIL (CLASS 560-C-3250 CONCRETE) 48" PRECAST PERFORATED CONCRETE RING 1" TO 1 1/2" WASHED ROCK A NON-WOVEN FILTER FABRIC PER SEC. 88-103 CAL. STD. SPEC. SHALL BE USED BETWEEN THE WASHED ROCK AND UNDISTURBED SOIL 12" 48" MIN. 5 1" TO 1 1/2" WASHED ROCK ON UNDISTURBED SOIL A MINIMUM 12" THICK

NOTES:

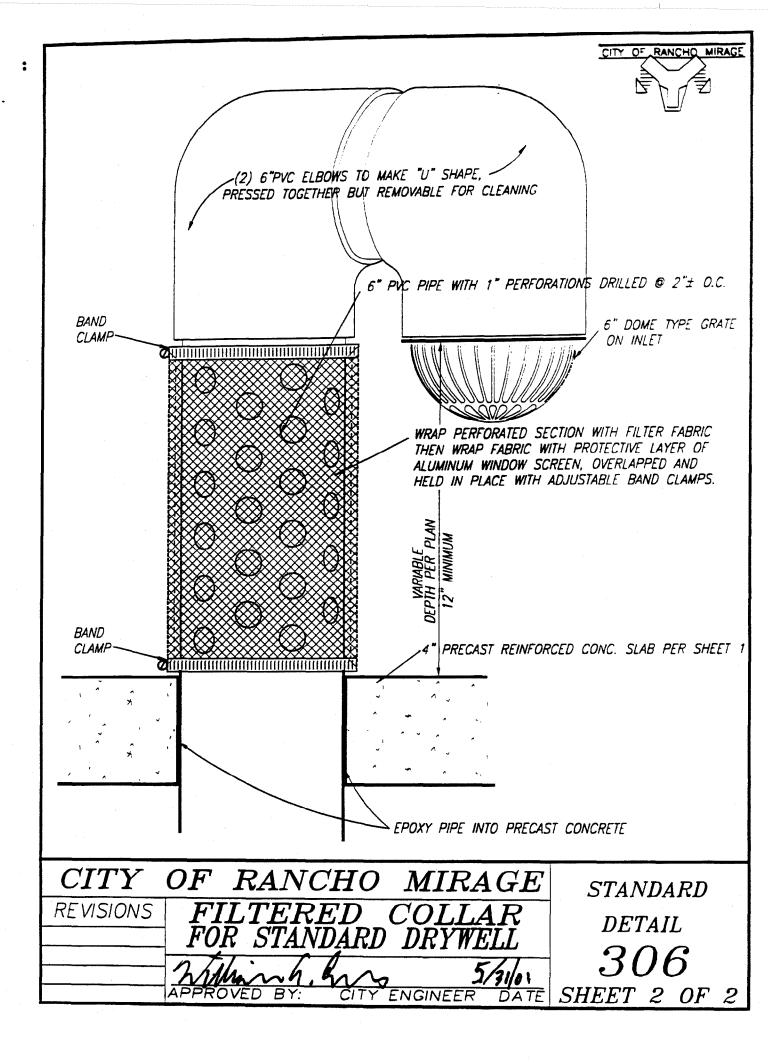
ALL JOINTS ABOVE THE LEACHING AREA SHALL BE MORTAR SEALED INSIDE AND OUT.

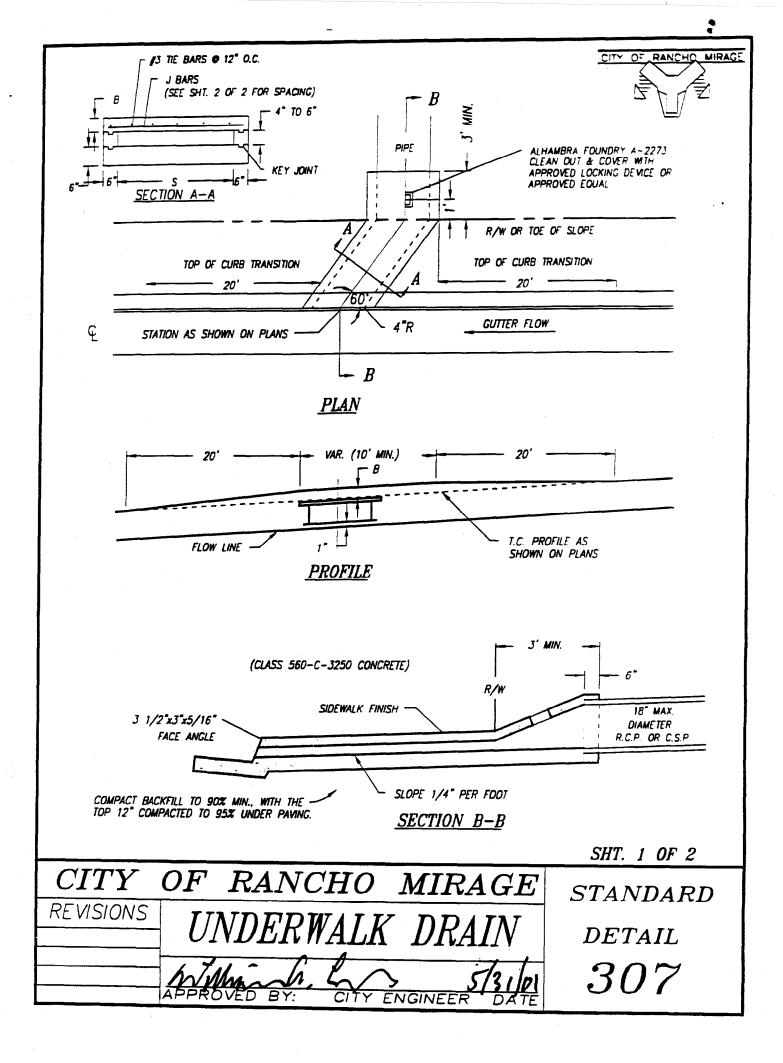
MAX. PERCOLATION RATE = 1"/HR, OR HALF OF AN ENGINEERED PERCOLATION TEST UP TO 5"/HR. MAX.

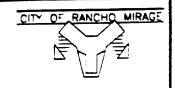
THE SURFACE AREA FOR PERCOLATION MAY BE THE OUTSIDE AREA OF THE GRAVEL (6.5' DIAM. TYP.)

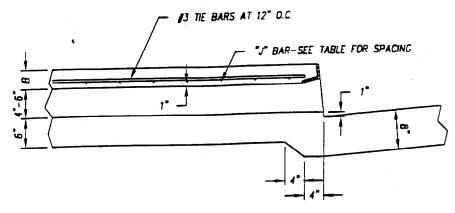
THE HIGHEST RUNOFF FROM A 100 YEAR FREQUENCY STORM, NO MATTER WHAT TIME LENGTH, SHALL BE UTILIZED WHEN CALCULATING THE STORAGE CAPACITY NEEDED IN A DRYWELL.

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DRYWELL DETAIL	DETAIL
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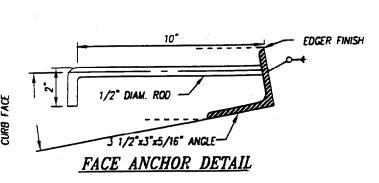








OUTLET DETAIL



SPAN	В	STEEL SCHEDULE J-BARS		
5		SIZE	SPACING	LENGTH
2' 0"	3"	#3	7"	2' 9"
2' 6"	\$1	•	"	3' 3"
3' 0"	ÞI	"	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	3' 9 "
3' 6"	,,	•,	6"	4' 3"
4' 0"	*	"	5"	4'9"
4' 6"	4"	"	16 1/2"	5' 3"
5' 0"	**	P1	5"	5' 9 "
5' 6"	24	,,	4"	6' 3"
6' 0"		,,	3 1/2"	6' 9 "

LENGTH OF	NO. OF
CURB OPENING	ANCHORS
3' OR LESS	2
3' 6" TO 6'	3

NOTES

- 1. FLOOR OF UNDERWALK DRAIN SHALL HAVE A STEEL TROWEL FINISH.
- 2. ALL EXPOSED METAL SHALL BE GALVANIZED AFTER FABRICATION.
- 3. HEIGHT OF CURB OPENING WILL VARY WITH TYPE OF CURB.
- 4. SPAN "S" AND HEIGHT OF CURB OPENING WILL BE DETERMINED FROM THE REQUIRED HYDRAULIC CAPACITY AND LIMITED TO THE DIMENSION IN THE ABOVE TABLE.
- 5. REINFORCING STEEL SHALL BE 1" CLEAR TO INSIDE OF CULVERT UNLESS OTHERWISE SHOWN.
- 6. SPAN "S" AND HEIGHT OF OPENING AND CURB FACE SHALL BE NOTED ON THE PLANS.

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CITY OF RANCHO MIRAGE

REVISIONS UNDERWALK DRAIN

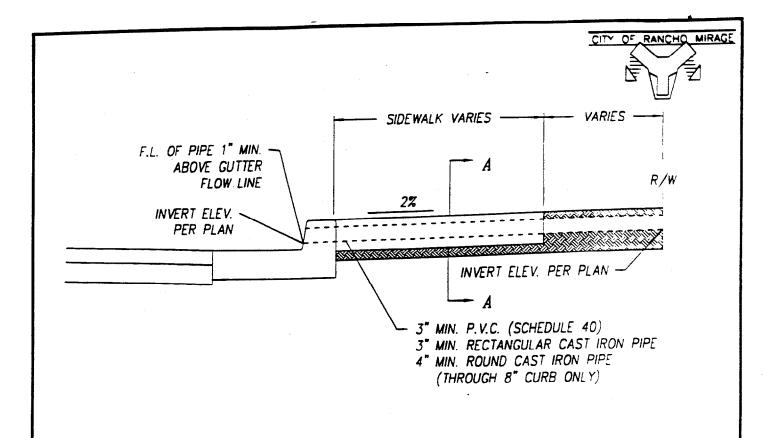
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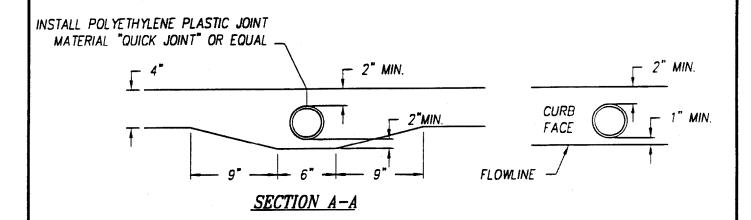
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STANDARD

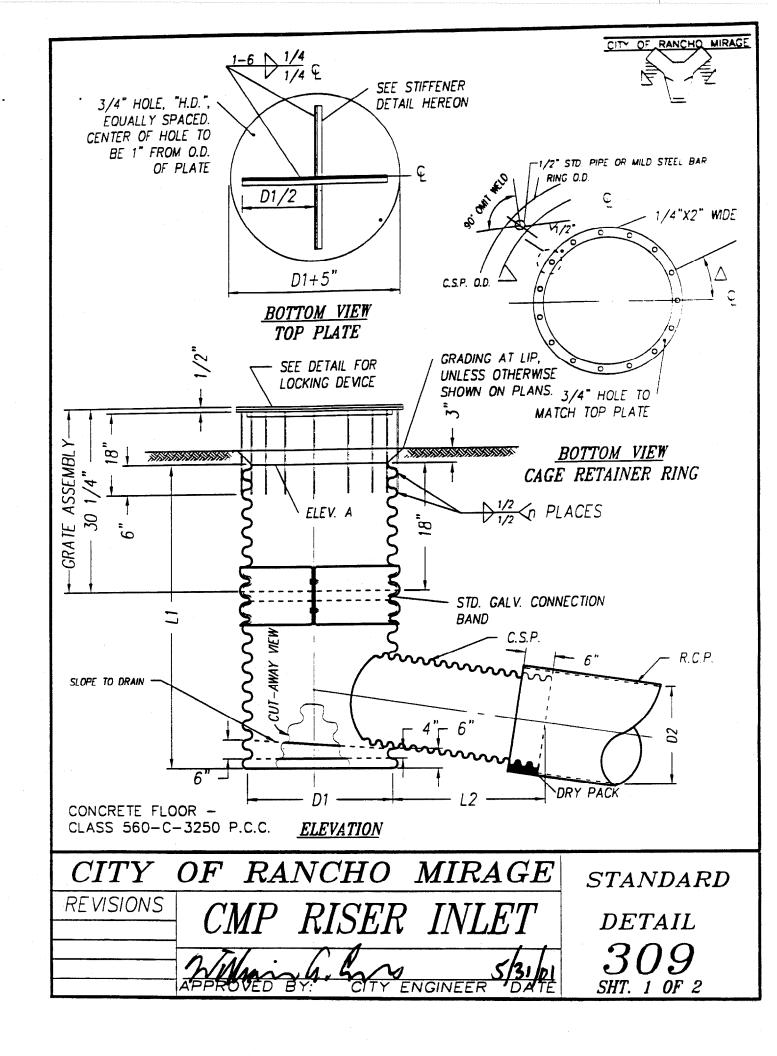
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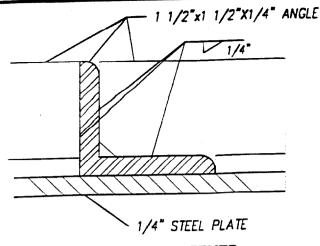




NOTE: DRAINS 4" AND LARGER TO BE CONSTRUCTED THROUGH 8" MINIMUM CURBING UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. SEE STD 307 FOR CURB TRANSITION.
WHEN THE DRAIN IS TO BE INSTALLED THROUGH EXISTING CURBING, THE CURB SHALL BE CORE DRILLED.

CITY OF	RANCHO	MIRAGE	STANDARD
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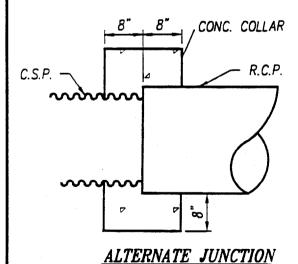
DETAIL-PLATE STIFFENER



D1	Δ	٦	"HD"
18"	4C*	g	
24"-27"	30.	12	2
30"-33"	2.**	15	
36" - 39"	20	18	_3_
42"-45"	16.5	22	
42"-45" 48"-51"	14,5*	22 25	
54"-57"	13'	28	4
60"-63"	11.5*	31	
66"	10.5*	34	

5/8"x5/8" SP/	ACER _ 2 1/2"x2 1/2"x5/8" STEEL BAR
	TEFLON TAPE - 7/8" -
SCARF AND WELD	
WELD .	
·	
·	1/2" ALLEN BOLT
	HOLD-DOWN (H.D.)

D1 RISER	C.S.P.
DIAMETER	IGAUGE
18"-27"	16
30"-39"	14
42"-48"	12
51"-66"	10



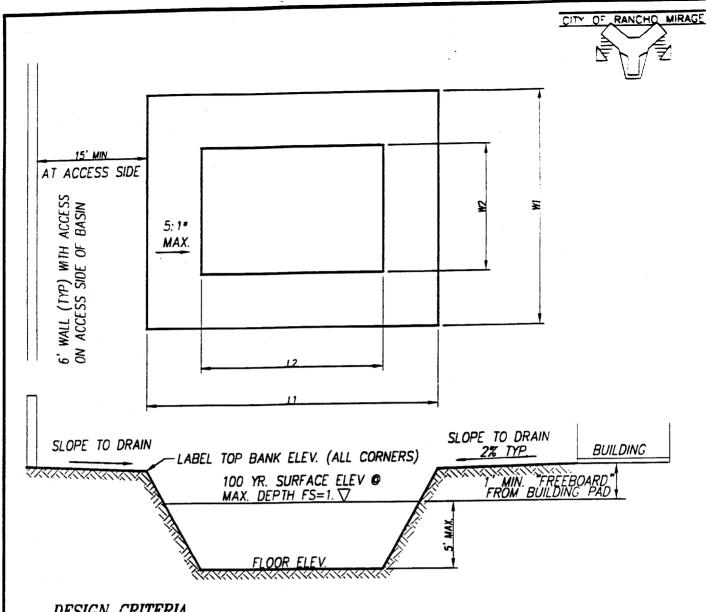
NOTES:

- 1. RISER PIPE SHALL EXTEND TO "ELEV. A".
- 2. ELEVATION A. D1, D2 L1, L2 ARE SHOWN ON PLANS.
- 3. CORRUGATED STEEL PIPE SHALL CONFORM TO AASHO M-36.
- 4. GRATE ASSEMBLY SHALL BE GALVANIZED AFTER FABRICATION.
- 5. FOR D1=54" AND LARGER, WELD 1 1/2"X1 1/2"X1/4" ANGLES TO PLATE WITH 1" WELDS AT 6" O.C.
- 6. n=NUMBER OF BARS ON GRATE ASSEMBLY.
- 7. GAUGE OF PIPE FOR DIAMETER D2 SHALL BE SAME AS FOR RISER.
- 8. RISER AND STUB SHALL BE SHOP FABRICATED AND GALVANIZED AFTER WELDING.

CITY	OF RANCHO MIRAGE
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	APPROVED BY: CITY ENGINEER DATE
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STANDARD **DETAIL** 309

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DESIGN CRITERIA

MAX. PERCOLATION RATE = 1"/HR. MAX. DEPTH AT PEAK STORAGE = 5' FACTOR OF SAFETY F.S. = 1.0 MINIMUM ONE FOOT MINIMUM "FREEBOARD" BELOW LOWEST BUILDING PAD TO MAXIMIUM WATER LEVEL THE BASIN SHALL BE DESIGNED TO RETAIN THE RUNOFF FROM THE WORST CASE OF THE 1 HR., 3 HR. 6 HR., OR 24 HR. DURATION, 100 YEAR FREQUENCY STORM. SEE SHT. 2 OF 2 FOR MINIMUM PLAN REQUIREMENTS

* SLOPES STEEPER THAN 5:1 WILL REQUIRE EROSION CONTROL APPROVED BY THE CITY ENGINEER

CITY	OF RANCHO MIRAGE	STANDARD
REVISIONS	RETENTION BASIN	DETAIL
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AT A MINIMUM, PLANS SHALL INCLUDE THE FOLLOWING INFORMATION:

- 1. BOUNDARY (LOT LINES) INCLUDING BEARING AND DISTANCES
- 2. SLOPE SYMBOLS, OR FINISH CONTOURS, WITH SLOPE RATIOS OR PERCENTAGES
- 3. ELEVATION LABELS FOR: BOTTOM, WATER SURFACE AT S.F.=1, AND TOP (HYDROLOGY CALCULATIONS SHALL BE SUBMITTED VERIFYING BASIN AREA, DEPTH, AND VOLUME.)
- 4. DIMENSIONS (LENGTH, WIDTH AND DEPTH) OR SCALED DRAWING.
- 5. FINISHED SURFACE ELEVATIONS FOR IDENTIFYING THE FLOW PATHS
- 6. RIP-RAP OR APPROPRIATE EROSION CONTROL IF SLOPES EXCEED 20% (5:1)
- 7. ANY STRUCTURES, PIPES, HEADWALLS, RIP-RAP, DRYWELLS, ETC. SHOWN WITH REFERENCE TO STREET PLANS, STORM DRAIN PLANS, OR GRADING PLANS (A DRYWELL IS RECOMMENDED FOR LARGER RETENTION BASINS AS A WAY OF INTERCEPTING "NUISANCE WATER' THAT MIGHT CAUSE A CONSTANT SWAMPY AREA TO DEVELOP IN THE RETENTION BASIN. FLOWS TO CVWD CHANNELS OR TO LAKES TYPICALLY REQUIRE A DRYWELL TO INTERCEPT STREET RUNOFF. MAINTENANCE IS EASIEST IF THE DRYWELL IS AT THE STREET SO VACUUM TRUCKS CAN ACCESS THEM. SEE STANDARD DRAWINGS 306 AND 311.)

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